Historic, archived document

Do not assume content reflects current scientific knowledge, policies, or practices.

9
96

LIBRARY
RECEIVED
★ NOV 19 1941 ★
U. S. Department of Agriculture

WEEKLY STATION REPORTS

OF THE DIVISION OF

DRY LAND AGRICULTURE

BUREAU OF PLANT INDUSTRY

U. S. DEPARTMENT OF AGRICULTURE

GPO
NOV 1 1941

Not for publication without
prior consent of this division

REPORT FOR THE WEEK ENDING NOVEMBER 1, 1941

HAVRE:

Cool temperatures and light wind movement prevailed during the week. Melted snow amounting to 0.04 inch was measured at 8 A.M. on October 29.

The last date of seeding winter wheat was made November 30. Fall growth of winter wheat has been exceptionally good.

A car of cull cows was shipped the latter part of the week. No ill effects from dipping the calves has shown up. Good results were anticipated, as weather conditions at the time of dipping was very favorable.

General farm work consisted mostly of leveling several irrigated fields that are to be spring sown with alfalfa. Surveys were also run for border dikes to be constructed on these fields. Physical plant repairs included rebuilding fences and shingling the garage and storehouse.

Maximum temperature, 65°; minimum, 8°; precipitation, 0.04 inch.

JUDITH BASIN:

Temperatures during the week were extreme with a maximum on one day of 26° and the minimum on that same day of 11°. Snow, accompanied with some wind, fell on two days, but there was only 0.05 inch of precipitation.

During the week the 21 steer calves were vaccinated for blackleg and branded. The late fall seedings of the Soil Conservation Service cooperative forage grass plantings were made under ideal conditions.

October was below normal in precipitation with a recorded total of 0.72 inch as compared to the station average of 0.97 inch. The mean temperature of 58° for October was the warmest during the 31-year period 1910-41. The station average mean for the month is 44°. Only on one day was the average daily wind velocity 10 or more miles per hour.

Maximum temperature, 69°; minimum, 11°; precipitation, 0.05 inch.

HUNTLEY:

Lower temperatures and overcast skies during much of the week were in contrast to the generally bright weather through most of October. Precipitation in the form of light snows was received on two days, but the moisture was lost by evaporation within a few hours. The ground froze hard enough one morning to halt tillage and sugar beet harvest for half a day. The cold snap quickly matured the leaves on trees and shrubs so that all foliage had fallen by the end of the week.

Most plantings of winter wheat on the station have made good progress despite the cold weather. Emergence appears to be complete in the variety test and rotation plots but is still backward in the nursery rows. Crested wheatgrass drilled in weed-covered land of the regrassing experiment is up with fair stands.

Field work on the Dry Land project included completion of corn husking, cultivating alleys between plots of crested wheat grass to destroy the heavy growth of volunteer grass seedlings, and removing pasture fences.

Maximum temperature, 67°; minimum, 13°; precipitation, 0.02 inch.

Precipitation for October, 1.03 in.; average, 1.16 in.

SHERIDAN:

Cool weather prevailed over the week, with light snow on the 29th and 30th. Only miscellaneous work about the buildings was accomplished on the station.

October on the whole was nearly 2° colder than the station average for the month and was the coldest since 1932. The total precipitation, 1.32 inches, was only slightly below the monthly average for the station.

Maximum temperature, 59°; minimum, 10°; precipitation, 0.05 inch.

DICKINSON:

Generally fair and seasonable weather continued throughout the week with only a trace of precipitation.

Total precipitation in October of 1.20 inches fell mostly as snow during the first half of the month.

Minimum temperature for the week and the month was 12° recorded on the morning of the 28th. The mean temperature for October of 42.1° was 1.5° below normal, and 6° below the exceptionally mild October in 1940.

The total precipitation of 7 inches in September and October exceeds any previous year of record for these months, and the total to the end of October, 30.61 inches, exceeds any previous year.

The fall growth of grasses and volunteer grains has provided excellent feed for livestock. Most of this green growth still persists even after the minimum temperature of 12°.

Maximum temperature, 65°; minimum, 12°; precipitation, Trace.

BELLE FOURCHE: Report for week ending October 25, 1941

Unsettled, cloudy, damp weather prevailed the greater part of the week, but the last two days were clear and relatively warm. Traces of rain were received on four days, and a heavy dew or frost was of daily occurrence.

Fall grain made good growth and is in excellent condition for withstanding the winter. Hay and pasture crops have become dormant, but volunteer small grains continue growth where moisture is available.

Corn was husked during the week, and hauling of corn stover and sorgo was completed. Yields of both crops were nearly average.

Maximum temperature, 67°; minimum, 27°; precipitation, Trace.

ARCHER:

The weather during the week was unsettled and rather cold with 0.23 inch of precipitation. The total precipitation for October was 1.07 inches. The 28-year average for the month is 0.90 inch. The total precipitation for 1941 to date is 19.59 inches.

Winter cereals at the station are in good condition. The same is true of these crops in eastern Wyoming and western Nebraska where the field husking of corn is under way and the last of the best crop is being dug. Livestock in general are in good condition with plenty of range and stored feeds.

Soil sampling, both on the SCS and Dry Land plots, was finished yesterday.

Maximum temperature, 55°; minimum, 16°; precipitation, 0.23 inch.

NORTH PLATTE:

The skies cleared Friday afternoon and Saturday following two weeks of cloudy, foggy weather. Light rains were recorded on Monday and Tuesday. High winds Saturday night and Sunday blew over a large proportion of the stalks in many corn fields in this section of the State. A maximum wind velocity of 55 miles per hour was recorded at the airport weather station. This was a record for October. Minimum temperatures below freezing were recorded on five days during the week.

The total precipitation for October was 1.07 inches, which is exactly the mean for the month. The total precipitation recorded since January 1 is 23.43 inches, or 6 inches above the mean for this period.

The husking of the experimental dryland and irrigated hybrid corn tests was completed this week. A maximum yield of about 60 bushels per acre was recorded in the dryland test and the commercial hybrids and experimental double crosses in the irrigated test averaged 90.6 bushels.

Maximum temperature 59°; minimum, 23°; precipitation, 0.34 inch.

AKRON:

Cloudy, rainy weather continued, with the precipitation sufficient and well enough distributed to prevent proper drying of shocked field crops. By tearing apart millet shocks Friday afternoon, it was possible to thresh on Saturday. Practically no such similar opportunities have presented themselves since last September 22. Three plots of Kursk, foxtail millet, on oat stubble land, averaged 3,633 pounds of hay per acre, including 1,005 pounds of seed. Two plots of the same variety on fallow along the highway averaged 4,775 pounds of hay per acre, including 2,580 pounds of seed.

Steers for the winter feeding experiment were delivered Monday.

Maximum temperature 71°; minimum, 23°; precipitation, 0.66 inch.

October precipitation, 3.15 inches, was the heaviest since 1908.

COLBY:

The week started with a high wind which blew all day Sunday, carrying thistles, buffalo burr, and tickle grass into fence rows and corn and sorghum fields where much lodging resulted. Since then it has misted or rained every day but one. On Thursday a few flakes of snow fell.

The minimum temperature was below freezing every day but one. The first killing frost of the season was on Monday morning when the temperature dropped to 30°. Only more tender plants were nipped, however. It was not until yesterday that practically all plant growth was stopped after minima of 28° on Tuesday and Thursday and 26° on Friday. The killing was very gradual this year. It seems that previous freezing temperatures and cool weather had toughened the usually tender plants such as tomatoes.

Wheat continued to make considerable growth until the last three days when the heavier frosts nipped the tips of the leaves. The fields still look about as green as before the frosts.

Dr. Hildreth of the Cheyenne Horticultural Field Station visited the station Friday. The chrysanthemums obtained from the Cheyenne station and set out last spring have been a showy attraction for station visitors all fall.

Maximum temperature, 62°; minimum, 26°; precipitation, 0.04 inch.
Precipitation, October, 1941, .75 inch; 54-year average, 1.02 inches.
Precipitation, January 1 to October 31, 1941, 29.48 inches; 54-year average, 16.47 inches.

GARDEN CITY:

Precipitation for the week amounted to 0.30 inch, most of which came in the form of snow. The first below freezing temperature came on Sunday night when the minimum dropped to 30°, but no serious damage occurred. Minimum temperatures for the remainder of the week ranged from 27° to 32°, except for one night when it rose to 37°. The first killing frost occurred on Friday night with the 27° minimum.

Winter wheat is in excellent condition except for leaf rust which is commencing to appear on the plots. Dry weather is needed to aid in harvesting and threshing sorghums.

Field work consisted of taking soil moisture samples and binding late maturing sorghums.

Precipitation for October was 2.23 inches, average 1.19 inches. Precipitation thus far this year is 25.67 inches, average 15.96 inches.

Maximum temperature, 64°; minimum, 27°; precipitation, 0.30 inch.

HAYS:

The weather has been cool, cloudy, and very damp all week. Much of the time it was misting or sprinkling Thursday afternoon. The rain turned to snow which continued through most of Friday. The total snowfall was 2.5 inches.

The temperature dropped to 27° last night. This morning the evaporation tanks were covered with a layer of ice. The week is ending with a full day of sunshine, the first whole day of sunshine in a long time. Most of the snow will be gone by nightfall.

The almost continuous wet weather during the past two weeks has been very unfavorable for the sorghum crops. The grain on the outside of the shocks is now blackened and damaged more or less for seed purposes. Very little threshing has been done.

The first killing frost for the season occurred on the night of the 27th at a temperature of 27°.

During the month of October only 8 clear days were recorded. Precipitation in measurable quantities occurred on 14 days. Total precipitation, 2.35 inches.

Snow occurs seldom here in October. The 2.5 inches recorded yesterday is the first October snow since 1928 when a 3-inch fall occurred, and the second since 1918.

Heavy rains, serious floods, and blocked highways have caused much damage in the eastern part and especially in the southeastern part of the State during the past two weeks.

Maximum temperature, 63°; minimum, 27°; precipitation, 0.43 inch.

TUCUMCARI:

Precipitation for the first 10 months of 1941, 34.60 inches, is above the all-time annual record of 33.49 inches, reached in 1919. October precipitation of 6.30 inches was the second highest of any October on record.

While heavy damage from floods occurred in much of the Southwest, the only local damage was to roads and crops. Much of the very heavy broomcorn crop had been pulled and was curing in the fields when rains began. It is uncertain how much of this crop will be salvaged. Much that had been ricked has molded or sprouted, it is reported. Grain and forage sorghums, to be used as bundle feed, have been severely damaged. Shocked fodder is somewhat molded and badly discolored. Many farmers, fearing frost, cut a large acreage ahead of shocking and have found themselves with thousands of bundles flat on the ground during a continuous rainy period in which 5 to 10 inches of rain have fallen. Milo to be headed has lodged extensively. It is reported that many sorghums are sprouting in the shock, on the stalk, and in bundles on the ground, but this condition has not been noticed on the station. Very probably there will be more feed lost this year, in this County, than was produced in the average year of the past seven.

Wheat is making excellent growth; however, many fields have not been seeded. Ranges are excellent, with cattle fat and heavy and prices very satisfactory.

Although recent rains have been discouraging and destructive, ranchers and farmers are in much better condition than in recent years in this locality. Feed is abundant, prospects for 1942 are very promising and prices obtained this year have been satisfactory when yields have been

considered. Even though great loss of feed and grain occurs the farmers will still have feed for livestock, there should be no cut-worm damage to wheat next spring, and the danger of soil blowing seems to be very slight.

A minimum temperature of 32° did not severely frost station crops, and it is hoped the final day's binding may be done next week. A great amount of sorghum heading remains to be done. Peanuts will be harvested as soon as conditions permit. Fields are too soft to make extensive examination of shocked feed and heads in baskets an agreeable task, but it is hoped clear, cool weather may result in only limited damage to grain. Stover will be of poor quality, but very abundant.

Maximum temperature, 72°; minimum, 32°; precipitation, 1.88 inches.
Precipitation the past two weeks, 5.16 inches.

DALHART:

The wet fall weather continued during the week. Precipitation totaling 1.07 inches was recorded on four days. On Thursday the temperature ranged around freezing, and a rather brisk snow continued through much of the day. This disappeared during the early part of Friday. There had been no frost before this snow, and there appeared to be but little freezing injury apparent on the foliage of plants. This morning there was a heavy frost with a temperature of 31°. The leaves on the sorghums appear to be injured rather severely, but the plants appear to be still alive.

This wet weather has stopped sorghum harvest, both binding of forage plots and hand heading of the grain sorghums. Nearly all the milo rotation plots and two replications of the sorghum varieties have been headed. The heads have been stirred or moved to prevent grain spoilage if possible. All heads and grain are badly discolored. The cooler temperatures have stopped the grain sprouting in the heads on the standing stalks. Grain deterioration has continued through the week both on the standing stalks and in shocks. This injury is quite general for the southern section of the Great Plains.

Precipitation of 5.67 inches for October is well above the average of 1.62 inches. The total precipitation for the first 10 months of the year is 40.76 inches. This is more than 7 inches above the previous yearly high. The average for the first 10 months of the year is 16.95 inches. The last 12 months have given 44.95 inches. One outstanding characteristic of this yearly rainfall has been the very low percentage of run-off.

Maximum temperature, 69°; minimum, 31°; precipitation, 1.07 inches.

BIG SPRING:

Station field work was again delayed by rain. The total was 1.21 inches, but it fell at two different times which kept the fields wet during most of the week.

This has been a most difficult fall for harvesting. It rains enough each week to reduce field operations to about half time. Cotton

continues to come to the gins at a rapid pace during favorable weather, but feed harvesting is slow because of labor shortage for that kind of work. Most labor prefers to pick cotton by the cwt., as they can earn more at that than they can at other farm work at a daily wage which the farmers can afford to pay.

Station work has consisted of cutting June 15 date of sorghums, heading milo in the rotations, and building a dipping vat.

Maximum temperature, 77°; minimum, 37°; precipitation, 1.21 inches.

WOODWARD:

The principal topic of discussion in Oklahoma during the past month has been rain and floods and spoiling grain and feed crops. At this station there were only seven days during the month when no precipitation was recorded. The total for the month was 9.66 inches. This was exceeded in October 1923 with 11.99 inches. Precipitation for the year to date is an even 40 inches.

Cereals sown September 15 to October 1 have made abundant growth, but later planted ones as usual have made little growth. As an indication of the amount of fall growth, the so-called clipping and yield experiment sown on September 15 produced over 500 grams green weight per row of forage, from a number of 16-foot rows. Rye is making more rapid growth than usual. The heavy rains have caused appreciable washing in plot roadways and across portions of the small grain nursery. A number of roadways have been diked to stop this. Leaf rust is quite prevalent this fall and is causing noticeable yellowing of leaves in parts of some fields.

Sorghum heads in wire baskets were moved into the barn to speed drying and to stop seed from sprouting. This is the first year since sorghum plots have been handled in this manner that there has been any appreciable damage to heads in the baskets. All the machinery has been moved out of one shed, and milo heads for seed are being spread on the cement floor to dry.

Harvesting has included heading of milo for seed, some late cereal plots, peanuts, late vegetables and tree, shrub, and grass seed. Some green wood cuttings have been made for propagation. Ammonium sulphate and superphosphate were applied to fertilized wheat plots on October 28. Three light frosts and 1½ inches of snow which fell on October 31 have caused no appreciable damage to tender plants such as cotton, sorghum, tomatoes, dahlias and castor beans. Three varieties of iris have bloomed this fall.

Maximum temperature, 72°; minimum, 31°; average hourly wind velocity, 5.6 miles per hour; precipitation, 1.31 inches.

- - - - - - - - - - - - - - - - -

NOTE:

This is the last weekly news letter of the season. November-March reports will be monthly.

96

LIBRARY
RECEIVED
★ DEC 17 1941 ★
U. S. Department of Agriculture

WEEKLY STATION REPORTS

OF THE DIVISION OF

DRY LAND AGRICULTURE

BUREAU OF PLANT INDUSTRY

U. S. DEPARTMENT OF AGRICULTURE

GPO
NOV 1941

Not for publication without
prior consent of this division

REPORT FOR NOVEMBER 1941

HAVRE:

The weather during the month averaged 5.4° warmer than normal. Wind velocity was over 30 percent higher than normal. No soil drifting occurred at the station, but there was some on large fallowed fields in the area. There was 5.2 inches of snow on the 17th and 18th. Total precipitation January-November, 12.63 inches or 1.34 inches above normal.

Seedhouse work was largely cleaning the registered Ladak alfalfa, and weighing and shelling the corn shrinkage samples from the D.L.A. field, corn varieties, corn nursery, and date of seeding plots. Work was finished putting in border dikes on 25 acres of irrigated land that will be seeded to alfalfa in the spring. The hay annex was completely filled with ground alfalfa hay for the yearlings on R.O.P. tests. The preliminary feeding period started November 19. Heifer calves and yearlings are included in the trials. The breeding herd has now been removed from summer range and are pastured on native range near the station. The grazing period this year was very favorable for livestock. Calf weaning weights in particular indicated that there was an ample forage supply.

Maximum temperature, 70°; minimum, -11°, precipitation, 0.70 inch; snowfall, 5.2 inches.

JUDITH BASIN:

November was 4° warmer than the station mean for the month. There was only one storm, but it lasted ten days. Precipitation was recorded on ten consecutive days. It began with a rain which later turned to snow and from 10-12 inches fell. After two days with minima below zero, temperatures rose and the warm high wind (Chinook) removed the snow quickly. November was very windy, with an average daily wind velocity of 10.4 miles per hour for the last half of the month and 8.5 miles per hour for the entire month. For one day the velocity was 20.2 miles per hour.

The steer calves have been ready for the winter feeding trials for more than three weeks, but the trials are being held up by the non-delivery of some protein supplement. It is hoped this delayed trial can be inaugurated early in December.

Maximum temperature, 67°; minimum, -12°; precipitation, 1.07 inches.

HUNTLEY:

Mean temperature, wind velocity, and precipitation during November were above the average. Soil and climatic conditions in the first half of the month were favorable for field work, but during the last half of the period light snows and showers kept the ground too wet to work.

Below-freezing temperatures nearly every night froze the surface 2 inches of soil, but usually this thawed out before noon. Minimum temperatures below zero were recorded on 2 mornings.

Field work on the dry-land project consisted of finishing up the fall plowing, threshing alfalfa seed, and taking down pasture fences.

Winter grains and crested wheatgrass have made a good growth during the month and appear to be going into the winter in excellent condition as to ground cover and reserve moisture supply.

Maximum temperature, 66°; minimum, -8°; precipitation, 1.06 inches. Average, .74 inch.

SHERIDAN:

The past month was one of the warmest Novembers that has been recorded here, about 4° above the average for the month. Wind movement was higher than usual, and precipitation was about two-thirds the average. There was one day on which the temperature was below zero.

Besides a late seeding of grasses, and heading the remainder and threshing all the grain sorghum varieties, but little field work was done. Fall-sown grain continues in good condition, both it and some grasses still remaining green.

Maximum temperature, 67°; minimum, -13°; precipitation, 0.52 inch Snow 3 inches.

DICKINSON:

Mild temperatures prevailed during most of November and there were no severe storms. The ground was bare of snow at the beginning of the month and for a week at the close. Only 6 days were clear, 14 were partly cloudy, and 10 cloudy. The minimum temperature of 6° below zero was recorded on the 22nd.

Soil moisture samples taken November 27 show that the soil was usually wet into the 6th foot on fallow, green manure, and corn ground. Fields in small grain this year were wet into the 4th and 5th foot generally, sometimes deeper. Crested wheatgrass sod was wet into the 4th foot. On grama grass sod in the pasture where the subsoil was a fine sand it was wet a full 6 feet. In trees planted in 1938 the soil was wet 6 feet deep or more. In the old stand of green ash planted in 1910 the soil was wet 4 feet, moist in the 5th foot, and dry in the 6th. These trees were all cultivated.

Measurements of trees taken during the month show that most trees made an excellent growth during 1941. Of trees set in the spring of 1938, American elm now averages 7.5 to 10.5 feet in height, hackberry 6.0 to 7.5 feet and green ash 5.6 to 5.9 feet. Native cedar, Juniperus scopulorum, has greatly exceeded Colorado blue spruce and western yellow pine in amount of growth. The cedar averaged 44 inches, bullpine 22 inches and spruce only 14 inches. Older, well established spruce trees made an excellent growth during the season, comparable to that of cedar or bullpine.

Maximum temperature, 63°; minimum, -6°; precipitation, 0.32 inch.
Precipitation January 1 to November 30, 1941 30.93 inches.

The Effect of Barnyard Manure on the Yield of Wheat
at Mandan, N. Dak.

One year ago a report was made on "the effect of barnyard manure on the yield of corn." Further examination of the results obtained from rotations in which manure has been applied has indicated that wheat yields have been significantly increased by barnyard manure.

Two general types of rotations have been studied: (1) corn, wheat, and oats, in which wheat follows corn: (2) wheat, fallow, oats, and corn (or potatoes), or wheat, corn or potatoes, oats and fallow. In the former, manure was applied to one of the crops, whereas in the latter it was applied to the fallow.

In comparing the average results from manured and non-manured rotations during the period since 1915, it appears that manure has increased the acre yield of wheat 2.8 bushels, or 16.6 percent. There was little difference in the increments of increase, whether the manure effect was from a direct application or from manure residue, or whether the wheat was on corn-land or on summer fallow. The straw yields were increased more in the 3-crop rotations than in the type including fallow.

Expressing the yield increases in percentage for both grain and straw they were as follows: 18.2 percent in case of grain, and 47.0 percent in case of straw in rotation type (1) where wheat follows corn; 17.4 percent in case of grain, and 37.3 percent in case of straw in rotation type (2) where wheat follows corn or potatoes; and 13.5 percent in case of grain, and 8.8 percent in case of straw in rotation type (2) where wheat follows fallow. There is a noticeable tendency for the spread of increase to decrease with the increase of moisture conservation in the rotation.

A study of the annual yields showed that out of 159 cases where wheat received the effect of manure, directly or indirectly, 122 showed straw increases and 99 showed grain increases.

That the productive capacity of the land in the rotations receiving manure has been more than maintained seems evident from the fact that wheat yields in 1941 in these rotations were equal to or higher than yields in 1914 and 1915 when the soil was virgin and when precipitation was the most favorable for any years of record. Yields of wheat in similar rotations not receiving manure, were significantly lower in 1941 than they were in 1914 and 1915.

General interest in the use of farm manures in the Plains has been apathetic largely because of the knowledge that any stimulus given to naturally productive soils in regions of limited rainfall would be out of proportion to the soil moisture balance. It is not improbable that some disinterestedness is traceable to poor preparation of farm manures. Prevailing recommendations are to spread manure direct from the stable to the field, whereas experimental results indicate that best results with crops require that farm manures be composted or humified before application to the land.

While farm manure is by no means the only source for maintaining or rebuilding soil fertility, it is a commonly available and quick source suitable for limited acreage. It should be carefully conserved, just as any other resource, and in general farm planning in the northern Plains consideration should be given to its use.

Weather for November 1941

In contrast with a year ago November weather was unusually mild. The lowest temperature was 2°, compared with a minimum of -19° for November last year. The maximum for the month was 62°, and the monthly mean was 2.8° above the normal for November.

The total precipitation was 0.27 inch, compared with the normal 0.58 inch. The total snowfall for the month was 2.5 inches, most of which came in the first part of the month and had disappeared by the middle.

BELLE FOURCHE:

November was uniformly mild, except for a brief cold wave on November 21 and 22, when the first subzero temperature of the season was recorded. The mean temperature for the month was 37°, which is 4° warmer than the average mean for November. Precipitation was recorded on 8 days, but in such small amounts that it was of no value to crops. The total was 0.17 inch less than average. A severe wind storm occurred on November 18 and 19, but fortunately was accompanied by only 0.8 inch of snow. There was no soil blowing during the month.

The surface soil on cultivated land is dry, but otherwise soil moisture conditions are more favorable than usual. Soil samples taken November 8 showed that land cropped in 1941 was generally wet to a depth of 12 inches. Winter grain remains green and is in excellent condition, but it made very little growth during the month.

Corn stubble plots and roads were duckfooted as a precaution against soil blowing.

Maximum temperature, 67°; minimum, -2°; precipitation, 0.32 inch.

ARCHER:

The weather during the fore part of November was rather cold and threatening with occasional light snow flurries, but the latter part of the month was clear and mild.

Winter cereals in this section are in good condition, and feed is plentiful. There is an ample supply of stored feeds for winter use, and the prairies are covered with an abundance of cured grass.

Prairie fires were frequent during the last few days. On November 27 two such fires occurred west of the station. The station crew fought the one nearest the farmstead, while the Wyoming Hereford Ranch crew fought the one that was traveling east on the south side of the

station fields. A south wind carried this fire into the station stubble field, and it burned up to the station buildings where it was put out. The station crew has since plowed fire guards and burned the dry vegetation along the south side of the highway on the north side of the station.

Maximum temperature, 71°; minimum, -2°; precipitation, .41 inch.

NORTH PLATTE:

Fair weather prevailed throughout most of the month. The mean temperature was about 4° above normal. Freezing or near freezing temperatures were recorded nearly every day, and the precipitation was about half the normal for the month. There was a high wind and some snow on the 22nd, and a minimum temperature of 3° on the 23rd. This was the only stormy period of the month.

The corn has been shredded and the sorghums threshed. The average yield of all DLA corn plots was 27.1 bushels. The highest yield was 49.0 bushels. Early Kalo yields were as follows:

Continuous cropped, spring plowed	31.3
Continuous cropped, fall plowed	30.2
Alternate crop and fallow	41.8
Two plots after fallow	51.3
Two plots after wheat	38.9

The wheat is going into the winter in excellent condition and a good crop is in prospect, judging from present conditions.

Maximum temperature, 80°; minimum, 3°; precipitation, 0.23 inch.

Accumulated departure since January 1, +5.76 inches.

AKRON:

November was practically devoid of precipitation, and the delayed field work was possible after about the 10th. The millets, beans, and sorghums were threshed in that order. The necessary rotation crops were cleared, and the late-fall cultural work performed the 26th. Some rotation corn and the comparative yield portion of the nursery remains to be husked and threshed. Another week to ten days will complete this type of field work. Some open land will then have to be surface worked to guard against soil blowing.

Coes on small grain stubble land yielded slightly more than 14 bushels per acre on the rotation plots, whereas corn is running from 5 to 8 bushels. Sudan grass stubble, peacock-dammed over the heavy early June rainfall period, yielded more than 18 bushels. The fall-plowed and the spring-plowed rotation stubble plots were comparatively level over that period. Coes was the high-yielding variety in that experiment this year. At harvest time it looked as if any one of at least four would yield as well or better. Some of the new proso selections were high in that experiment. Mosaic seriously damaged the beans in the variety experiment. On stubble land at other places about the station they produced close to 6 bushels per acre.

Ronald Tom arrived on the 4th and started the steer feeding experiment. The animals weighed in at about 675 pounds each.

Lots, 1, 2, 3, and 4 get cut sorgo fodder as roughage. Lot 4, in addition, gets sorgo silage. The grain ration is, Lot 1, cracked corn; lot 2, cracked Coes; and lot 3, cracked corn and Coes in equal amounts.

County planning groups from 12 northeastern Colorado counties met at the station the morning of November 24. They were joined by many State College officials. After a word of welcome by the superintendent, and a tour of the station, the group retired to Akron for dinner and an afternoon program. This meeting was arranged by the Director of the State Experiment Station to test the sentiment of the near-by farmers on the work of the station, and to get their suggestions about work that needed to be done.

Maximum temperature, 81°; minimum, -2°; precipitation, 0.01 inch.

COLBY:

November was mostly dry, warm, calm, and pleasant. The precipitation was not much more than half of normal. Precipitation was recorded on 8 days with 0.15 inch the highest recorded in one day. The snowfall was 1.7 inches, practically all of which fell on the 22nd when it snowed all day. The snow drifted considerably.

The only extremely low temperature was on the morning of the 23rd when the minimum dropped to -4°.

There were no extremely windy days and there was no soil blowing.

It was a fairly favorable month for field work of which there was a lot to do over the country, corn husking, sorghum harvesting and threshing, and small grain threshing. The corn and sorghum plots were hauled in and weighed. The sorghums were threshed, and the corn is being husked. The milo plots yielded surprisingly well. They had all dried appreciably, some considerably, and many grains in the heads failed to develop. The average yield was next to 1923 the highest on record, 38.3 bushels. The highest yielding plot was MC D with 64.1 bushels to the acre. This was 16.2 bushels more than the next highest plot, 155C, also on fallow. The highest yielding cropped plot was MC A with 45. bushels. The diked plot yielded 44 bushels. The kafir and sorgo plots gave high yields of fodder, but the grain yields were not up with the milo. The certified field of Colby milo on the station averaged 28.5 bushels.

The late fall tillage work on the plots was done on the 14th. The ground was moist to wet and turned up mostly mellow. Wheat has made excellent growth and covers the ground. Over the country much of it is very rank. It is furnishing an abundance of pasture for big bands of sheep and many cattle.

Maximum temperature, 80°; minimum, -4°; precipitation, 0.30 inch; snow, 1.7 inches. Precipitation, January 1 to November 30, 1941, 29.78; 54-year average, 17.04 inches.

HAYS:

Because of an unusually large number of cloudy and damp days for this time of the year, the month of November seemed to be a very wet one, but the total precipitation was 0.30 inch below normal. The ground, especially the surface soil, was very wet, too wet for good tillage. The surface soil was so soft it was difficult to haul feed off the fields.

Wheat is looking fine on every plot that received some tillage during the year, regardless of the method or amount of tillage. This includes all corn and sorghum stubble plots. On the continuously stubbled-in plots where the wheat was drilled in the wheat stubble there is a very poor stand and it looks sickly. There is practically no volunteer wheat on these plots. Wheat drilled in wheat stubble for the first time has small chance of making a crop for the reason that there was present at the time of drilling a heavy growth of volunteer which has about smothered out the drilled-in wheat. The chance for a crop on these plots rests upon the survival and productivity of the volunteer.

During the month the late tillage work was completed, sorghum crops were threshed and the annual application of barnyard was made on certain rotations. A number of soil samples were collected for moisture determinations - a much larger number than usual because wet weather prevented the usual amount in October.

West of a north and south line across the State through Russel County the wheat is in excellent condition and prospects at this time of the year were seldom if ever better for a big crop. East of that line, however, I think I have not seen prospects poorer. Some of the wheat was destroyed by floods, and a large additional acreage was badly damaged by continuous wet weather. A considerable acreage has recently been sown and is not yet up, and still more prepared land has not been seeded. It seems to me the poor prospects in eastern Kans. together with the reduced acreage in the good wheat area of Western Kans. should hold the total production for the state down to about normal for next year.

Maximum temperature; 74°; minimum 6°; precipitation 0.54 inch, including 1 inch of snow.

GARDEN CITY:

The month as a whole was pleasant with temperatures and wind about normal. Precipitation for the month amounted to 0.47 inch while the average is 0.68 inch.

Sorghum threshing was begun on the 18th but due to rain and snow on the 18th, 21st, and 22nd, it is not completed. Heavy frosts also moistened the sorghums, so that threshing couldn't commence until late in the mornings. Most of the D.L.A. project is completed, however, and about all that remains is the basin lister project. Not all the yields have been calculated, but the one on the D.L.A. project which appears to be the highest, rotation 302, was 74.5 bushels per acre of Finney milo. All the kafir plots have been threshed, and the yields ranged from 6.0 to 43.8 bushels

Wheat planted at the recommended date is in excellent condition, but that planted early which isn't being pastured has made too rank growth.

Other field work consisted of cultivating plots to destroy volunteer wheat and taking soil moisture samples.

Maximum temperature, 78°; minimum, 5°; precipitation, 0.47 inch. Precipitation, January-November, 26.14 inches; average for the same period, 16.64 inches.

TUCUMCARI:

November, in marked contrast to preceding months, was low in precipitation and warm. It was the warmest and driest November since 1934 as well as unusually low in wind movement.

Perfect harvest weather prevailed throughout most of the month but heavy precipitation at the close of October prevented late fall work until nearly November 15. Good progress in threshing and other work has been made the past two weeks.

All sorghum roughage was severely damaged by excessive rainfall. Grain is not seriously damaged, but threshing is difficult, for the heads are tough and a clean job of separation is almost impossible to attain. Yields will in most cases equal or somewhat exceed the long-time average, but no exceptionally high yields will be obtained.

Precipitation for the year to date, 34.74 inches, surpasses all records and is more than twice the normal annual precipitation. Prolonged cool, rainy periods in the growing season appeared to retard crop development in many instances, and better crops than the 1941 crop have been produced on less than half the precipitation received this year.

Fall work has been delayed, and threshing will not be completed for a week or ten days. Winter work will include periodical raking and hauling or burning of weeds from fence lines, required each time high wind occurs. Great fear is felt throughout the area, as grass fires have not in many years been so probable or dangerous. Fire guards have been plowed along many country roads, section lines, and in some instances entirely around ranches and farms. Local, State, and Federal agencies are cooperating in every conceivable way to encourage this work, as well as working on educational lines to reduce fire hazards.

Maximum temperature, 78°; minimum, 15°; precipitation, 0.14 inch.

DALHART:

The weather during the month remained favorable for field work. Harvesting grain sorghum heads and stover had not been possible during the last half of October because of the excessive rains. Early in November the plots were harvested with a binder where total weights are taken. Heading of plots and threshing was the main work during the latter part of the month. All rotation milo and kafir plots, sorghum variety plots, and two sorghum nurseries have been threshed. There remains about

two weeks of heading and threshing, and in addition the fall tillage and stover weighing. Thus there is left to do fully a month's work in the field.

Yields of the material threshed have been excellent. The milo rotation plots averaged slightly in excess of 40 bushels per acre, plots ranging from 13.1 to 71.6 bushels to the acre. Kafir rotation and tillage plots averaged just above 33 bushels; the yield for the low plot is just above 20 bushels and for the high plot 52.8 bushels. The excessive rainfall caused an apparent leaching of nitrates from the soil, so that soil amendments -- manure and green manure -- gave extraordinary yield responses. These treatments are confined to milo in the grain sorghum series in the rotations. This largely accounts for the higher average yields of milo. Five such treatment plots in the west field averaged 64.4 bushels of grain per acre.

The excessive rainfall in October after the milo was mature caused swelling of the grain. This resulted in a low test weight for milo. Kafir test weights were 58 pounds per bushel or better for most plots in contrast to 50 to 52 for milo. The milo grain showed 10 percent or more discoloration, while the kafir grain had an excellent color.

Fall plowed plots gave higher yields than either fallow or spring plowing. This is a normal expectancy for a wet season.

Grain sorghum variety plots were likewise better on the continuously cropped than on the fallow series. The 13 grain sorghums in the regular variety test tended to fall into two groups. The ranking for the varieties in the high group on cropped land in descending order is; Dwarf hegari, 55.5 bushels; Club kafir, 51.3; Early hegari, 50.1; Migari, 49.7; Finney milo, 49.2; Sedan kafir, 48.4; and White Darso, 47.2. The other group ranked; Sunrise kafir, 38.7; Ajax, 37.4; Feterita, 36.6; Spur feterita, 36.1; Texas Blackhul kafir, 35.6; and Dwarf Yellow milo, 5.9. The last variety was severely injured by pythium root-rot.

Maximum temperature, 78°; minimum, 12°; precipitation, 0.02 inch.

BIG SPRING:

Favorable weather prevailed during the greater part of the month. Only one shower was received. Temperatures remained high with very few cloudy days. The first frost of the season occurred November 8 when the minimum dropped to 30°. This did not kill vegetation except in the low spots. The first freeze to kill plant growth occurred November 23 when the low point was 23°. This was 13 days later than the normal frost date. The grain and forage sorghums were well matured by this time; in fact, some second growth sumac was nearly matured. Late maturing cotton was aided in opening by the freeze.

These favorable weather conditions aided the farmers materially in getting their cotton picked and feed harvested. It is estimated that better than 90 percent of the cotton in the county has been picked. What remains in the field will probably be pulled, as it consists mainly of scattered bolls many of which are partly opened.

Station work has consisted mainly of picking cotton and heading milo. With the exception of a few plots of cotton, the Station harvest is about completed for this year. The winter wheat plots were planted during the first part of the month, and all have emerged to good stands.

Forty-eight head of Hereford calves were received November 5 for this year's feeding experiments. They have been kept on a uniform preliminary feeding period and will be divided into lots December 2.

Station visitors included W.H.Black of the Bureau of Animal Industry and J. M. Jones and G. W. Barnes of the Texas Animal Husbandry Division.

Maximum temperature, 81°; minimum, 23°; precipitation, 0.18 inch.

LAWTON:

The weather as a whole was favorable for farm work that had been delayed so long by the wet weather in October. Temperatures below freezing were recorded on only 9 dates.

Cotton picking progressed swiftly and most of the crop, much of it planted very late, was harvested by the first of December. Fall weather damage was severe, resulting in a low grade of lint that was badly cut in ginning because of excess moisture. Planting seed will be scarce and expensive in the spring of 1942.

Corn that was not harvested early in the fall suffered extensive damage as it lay on the ground saturated with water. Sorghum crops that were well shocked are in fairly good shape. Harvest of late planted sorghums was delayed until November, and such crops cure very slowly.

The November rainfall was only 1.41 inches. But only very little moisture keeps the soil too wet for tillage operations. To date, only 9 rotation plots have been fall plowed, and 7 plots have been listed. Recent attempts to continue plowing were frustrated by wet soil.

Fall plantings of wheat, oats, and barley have made only moderate growth, but these crops appear to be in a vigorous, thrifty condition. Volunteer growth of such crops has been rank, and some oats that were not grazed have headed. A good many farmers were still planting wheat by the first of December. A heavy infection of virulent pustules of leaf rust prevails on the plantings made early in October. Whether stem rust is present or not has not been determined.

Cotton picking and ginning on the station was completed in November. Yields were high, averaging between 250 and 300 pounds of lint per acre in spite of extensive boll weevil damage in many instances.

Threshing of sorghum crops in the cooperative project was completed about the middle of November. Yields were low and the quality of the grain was very poor. Recent preliminary germination tests indicate that but little of the seed that was selected and saved will be fit for planting purposes. A near grain failure in a year such as 1941 is attributed to injury by an extreme population of the Rice stink bug during the blooming period.

WOODWARD:

November skies were mostly fair except during the first week, nearly ideal autumn weather prevailing thereafter. Rainfall was only 0.64 inch, the smallest monthly amount received thus far in 1941. Precipitation since January 1 now totals 40.64 inches, or just short of the annual high record. With favorable conditions, considerable delayed farm work was caught up, including harvesting and threshing sorghums, putting up feed reserves, and completing the seeding of fall grains. Wind movement during the month as a whole was light except for a blow of short duration on the 18th which caused sporadic soil blowing.

Wheat in general made only fair progress. Stands appear satisfactory, except where gullying and silting from October rains have been pronounced. Cool soil, lack of extended warm periods, and leaf rust probably contributed to relatively slow growth. Date-of-seeding tests usually required about two weeks for emergence. Sorghum harvest was completed and with improved conditions for drying, threshing of experimental plots has been finished, excepting increase seed and feed grain. Yields exceeded 45 bushels per acre in some instances. Threshing S.C.S. grass seed collections is in progress. The new seed shed is being used to advantage for cleaning and storage.

A few late vegetables were harvested in the experimental garden, but tomatoes succumbed to a killing frost on the 5th. Seed of a number of improved selections of tomatoes was obtained this year. Grape vineyards were checked and a few replacements made in the variety blocks. A number of species in the perennial flower nursery set considerable seed. Chrysanthemums continued to bloom until checked by a sharp frost on the 23rd.

A seed supply from a number of species of trees and shrubs was also obtained, some of which has been processed satisfactorily with a hammer-mill. Various selections have been started in the greenhouse in sterilized soil. Hardwood cuttings of crapemyrtle were made. Other work included measuring the seasonal growth in the permanent tree blocks and preparation of additional sites in the Spring Creek Arboretum area for winter plantings.

Completion of livestock handling facilities at the Experimental Range is now well along, and 310 head of yearling white-face steers were turned into the southwest reserve pasture on the 12th. These will be lotted and placed in 20 native grass pastures early in December to start the winter and year-long experiments and to utilize 1941 grass from summer pastures which have not been grazed since last year owing to fence building, water development, et cetera. A rodent survey conducted by the Fish and Wild Life Service of the Department of Interior has been in progress at the Unit during recent weeks.

Maximum temperature, 81°; minimum, 18°; precipitation, 0.64 inch; snowfall, trace; reservoir full, 19.4 feet.

NOTE:

In a recent memorandum from the Director of Procurement he offers the following comments which are self-explanatory:

"A recent survey reveals that many Field offices are buying in the open market stationery and ink items which are obtainable at better prices from the Procurement Division stock.

"It is requested that all Field offices be instructed to requisition the items stocked by the Procurement Division whenever the prices shown in the Schedule of Stock Items are less than local prices obtainable, due consideration being given to transportation costs and delivery factors."